Pacific Gas and Electric Company®

Paula Gerfen
Site Vice President

Diablo Canyon Power Plant
Mail code 104/6/605
P.O. Box 56
Avila Beach, CA 93424

805.545.4596
Internal: 691.4596
Fax: 805.545.4234

September 15, 2020

PG&E Letter DCL-20-077

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

10 CFR 50.73

Docket No. 50-323, OL-DPR-82
Diablo Canyon Power Plant, Unit 2
Unit 2 Licensee Event Report 2020-002-00, Unit 2 Manual Reactor Trip Due to Increased Main Generator Hydrogen Usage

Dear Commissioners and Staff,

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv)(A), Pacific Gas and Electric Company (PG&E) hereby submits the enclosed Diablo Canyon Power Plant (DCPP) Unit 2 Licensee Event Report regarding a manual reactor trip and the automatic actuation of the auxiliary feedwater system as expected, due to increased main generator hydrogen usage.

PG&E makes no new or revised regulatory commitments (as defined by NEI 99-04) in this report. All corrective actions identified in this letter will be implemented in accordance with the DCPP Corrective Action Program.

This event did not adversely affect the health and safety of the public.

Sincerely,

Paula Gerfen

dqmg/51082265
Enclosure
Cc/enc: Samson S. Lee, NRR Senior Project Manager
Scott A. Morris, NRC Region IV Administrator
Christopher W. Newport, NRC Senior Resident Inspector
INPO
Diablo Distribution

NRC FORM 366 (08-2020)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2023

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Library, and Information Collections Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk ail: oira_submission@omb.eop.gov. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

LICENSEE EVENT REPORT (LER)

(See Page 3 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. Facility Name	2. Docket Number	3. Page
Diablo Canyon Power Plant, Unit 2	05000323	1 OF 3

4. Title

Unit 2 Manual Reactor Trip Due to Increased Main Generator Hydrogen Usage

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Rev No.	Month	Day	Year	Facility Name	Docket Number
										05000
07	17	2020	2020	- 002 -	00	09	15	2020	Facility Name	Docket Number
										05000

9. Operating Mode	10. Power Level
1	100

11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: *(Check all that apply)*

10 CFR Part 20	☐ 20.2203(a)(2)(vi)	☐ 50.36(c)(2)	☒ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(A)	**10 CFR Part 73**
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.69(g)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(4)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(i)	**10 CFR Part 21**	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(1)(i)
☐ 20.2203(a)(2)(ii)	☐ 21.2(c)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(i)
☐ 20.2203(a)(2)(iii)	**10 CFR Part 50**	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)	☐ 73.77(a)(2)(ii)
☐ 20.2203(a)(2)(iv)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)	
☐ 20.2203(a)(2)(v)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)	

☐ **Other** (Specify here, in Abstract, or in NRC 366A).

12. Licensee Contact for this LER

Licensee Contact	Phone Number (Include Area Code)
David Madsen	805-545-6192

13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable To IRIS	Cause	System	Component	Manufacturer	Reportable To IRIS

14. Supplemental Report Expected		15. Expected Submission Date	Month	Day	Year
☒ No	☐ **Yes** (If yes, complete 15. Expected Submission Date)				

16. Abstract (Limit to 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)

On July 17, 2020, at 13:46 Pacific Daylight Time, with Diablo Canyon Power Plant Unit 2 operating at 100 percent power, the reactor was manually tripped in accordance with plant procedures due to increasing hydrogen usage in the Unit 2 Main Generator.

The reactor trip was uncomplicated, and the auxiliary feedwater system started as expected.

This event is being reported per 10 CFR 50.73(a)(2)(iv)(A) due to a manual reactor trip and the associated automatic actuation of a specified safety system.

The cause of the increased hydrogen usage was due to a leak in a weld segment located on the Unit 2 Main Generator exciter end stator coil cooling water manifold.

There was no impact to the health and safety of the public or plant personnel.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Diablo Canyon Power Plant, Unit 2	05000-323	2020	- 002	- 00

NARRATIVE

This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A) and the associated guidance of NUREG-1022, Revision 3, due to a manual reactor trip and the subsequent automatic actuation of the auxiliary feedwater (AFW) system as expected

This event was initially reported in Event Notification 54789 in accordance with the requirements of 10 CFR 50.72(b)(2)(iv)(B) as a manual actuation of the reactor protection system and 10 CFR 50.72(b)(3)(iv)(A) as an automatic actuation of a specified safety system.

II. Plant Conditions

At the time of the event, Diablo Canyon Power Plant (DCPP) Unit 2 was in Mode 1 at 100 percent power.

III. Problem Description

A. Background

The basic function of the turbine generator is to convert thermal energy initially to mechanical energy and finally to electrical energy. The generator is cooled by hydrogen, which is circulated by a blower inside the generator. The hydrogen gas system, which is part of the turbine generator system, dissipates the heat, provides a safe means of adding or removing hydrogen, maintains the gas pressure, dries the gas to remove undesired vapors, and monitors the hydrogen for pressure, temperature and purity.

The AFW system serves as a backup supply of feedwater to the secondary side of the steam generators when the main feedwater system is not available, thereby maintaining the heat sink capabilities of the steam generators. As an engineered safety feature system, the AFW system is directly relied upon to prevent core damage and reactor cooling system over pressurization in the event of transients such as a loss of feedwater or a secondary system pipe rupture, and to provide a means for plant cooldown following any plant transient.

B. Event Description

On July 17, 2020, at 13:46 Pacific Daylight Time, with DCPP Unit 2 operating at 100 percent power, the reactor was manually tripped in accordance with plant procedures due to increasing hydrogen usage in the Unit 2 Main Generator.

C. Status of Inoperable Structures, Systems, or Components that Contributed to the Event

The reactor trip was uncomplicated, and the AFW system started as expected. There were no inoperable Technical Specification structures, systems, or components that contributed to the event.

D. Method of Discovery

Self-revealing. Increased hydrogen usage was validated following the receipt of the low hydrogen pressure control room annunciator.

E. Operator Actions

The Operations crews responded to this event in accordance with plant operating procedures.

F. Safety System Responses

The AFW system responded as expected following the manual reactor trip.

IV. Cause of the Problem

The cause of the increased hydrogen usage was due to a leak in a weld segment located on the Unit 2 Main Generator Exciter End stator coil cooling water manifold.

V. Assessment of Safety Consequences

There were no safety consequences as a result of this event.

There was no impact on health and safety of the public or plant personnel.

VI. Corrective Actions

The Unit 2 Main Generator Exciter End manifold was repaired. Follow-up corrective actions to prevent recurrence will be managed in accordance with the DCPP Corrective Action Program.

VII. Additional Information

There have been no similar events at DCPP in the previous three years.